

Fig. 1

- Step 1. Get the picture type and $N_{i,k}$, $Q_{i,k}$, from parsed MPEG-2 stream.
- Step 2. If this is the first time for this picture type, set $Q_{o,k}$ equal to $Q_{i,k}'/r$ and go to step 7.
- Step 3. Update the accumulated target bits, target complexity, actual bits and actual complexity for this picture type.
- Step 4. Compute the complexity ratio $\alpha_k = \frac{\sum_{j=0}^{k-1} (Q_{o,j} \cdot N_{o,j})}{\sum_{j=0}^{k-1} (Q_{i,j} \cdot N_{i,j})}$.
- Step 5. Compute the bitrate adjustment factor $B_k = \frac{\sum_{j=0}^{k-1} N_{o,j}}{r \cdot \sum_{j=0}^{k-1} N_{i,j}} = \frac{r_k'}{r}$.
- Step 6. Compute $Q_{o,k} = \frac{\alpha_k \cdot Q_{i,k}}{r} \cdot B_k$.
- Step 7. Encode this frame using $Q_{o,k}$ as the quantization parameter.
- Step 8. Repeat Step 1 to Step 7 for all the remaining frames.

Fig. 2

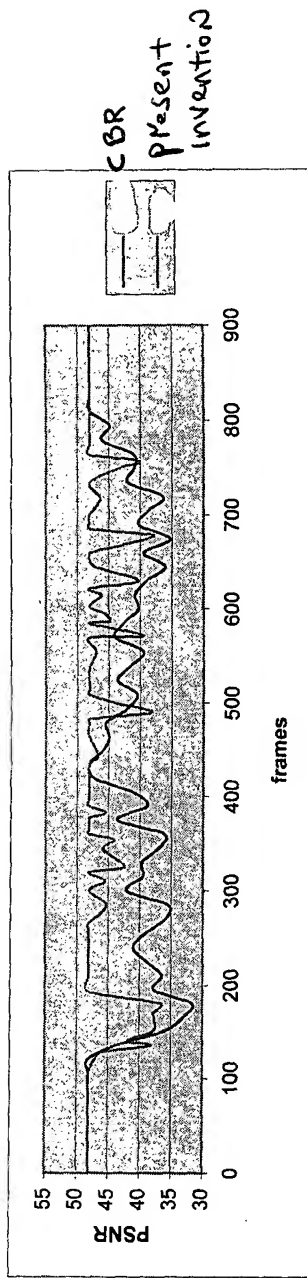


Fig 3

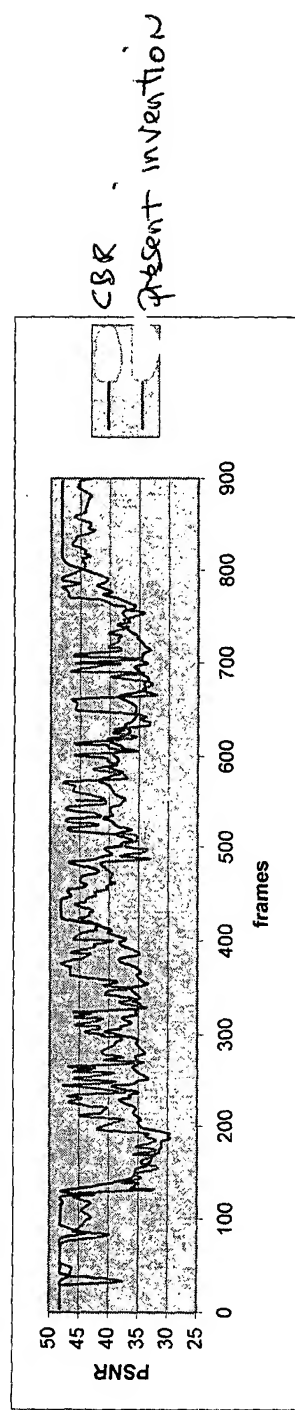


Fig. 4

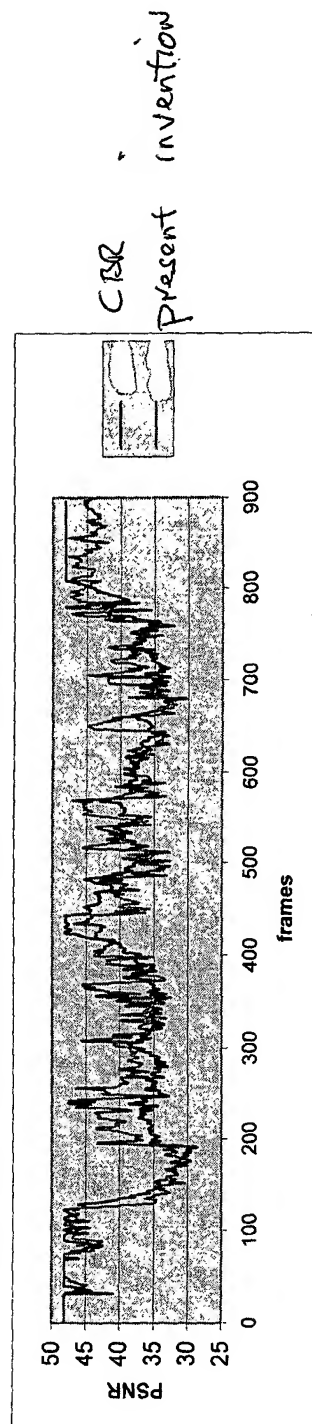


Fig. 5

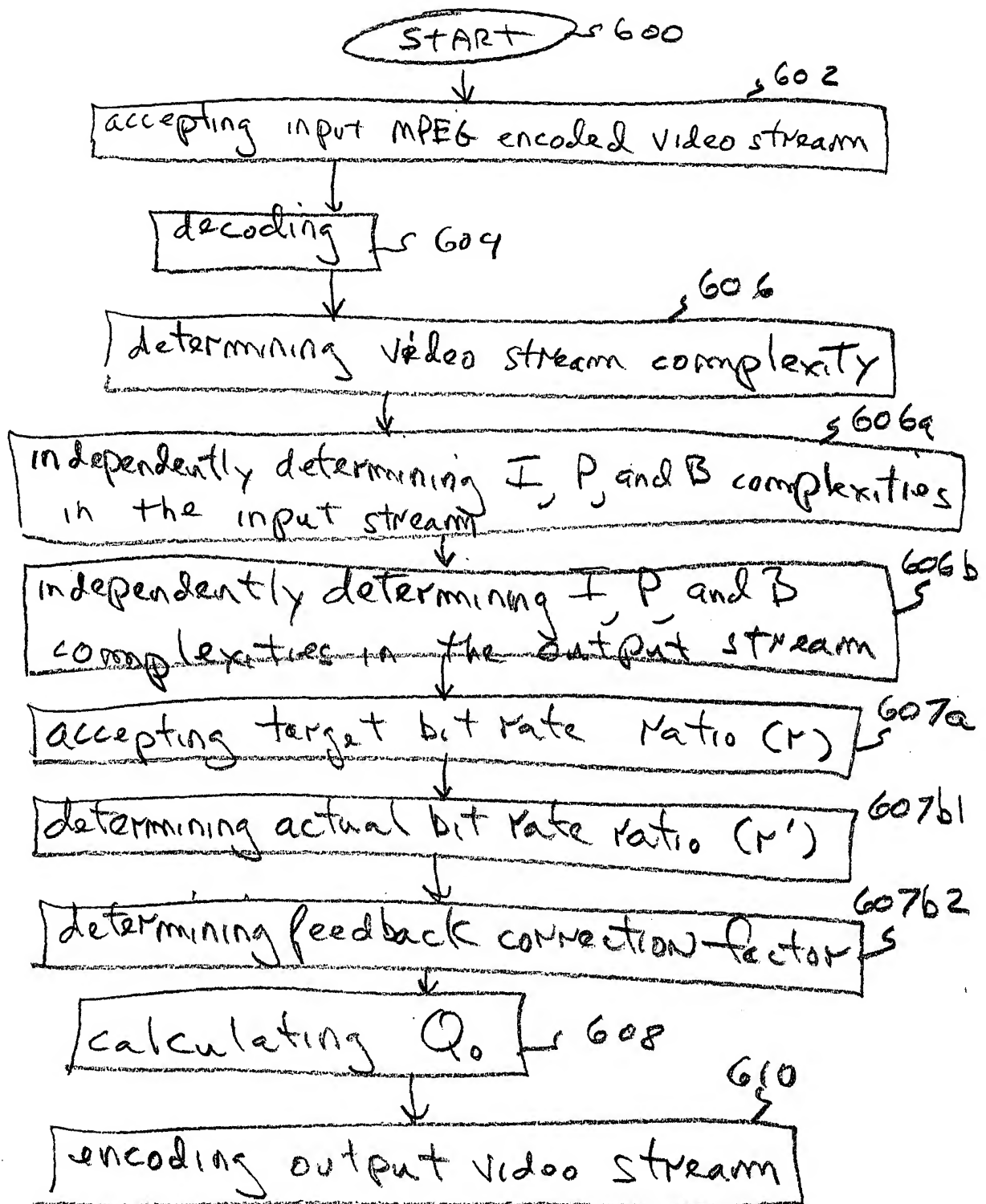


Fig. 6

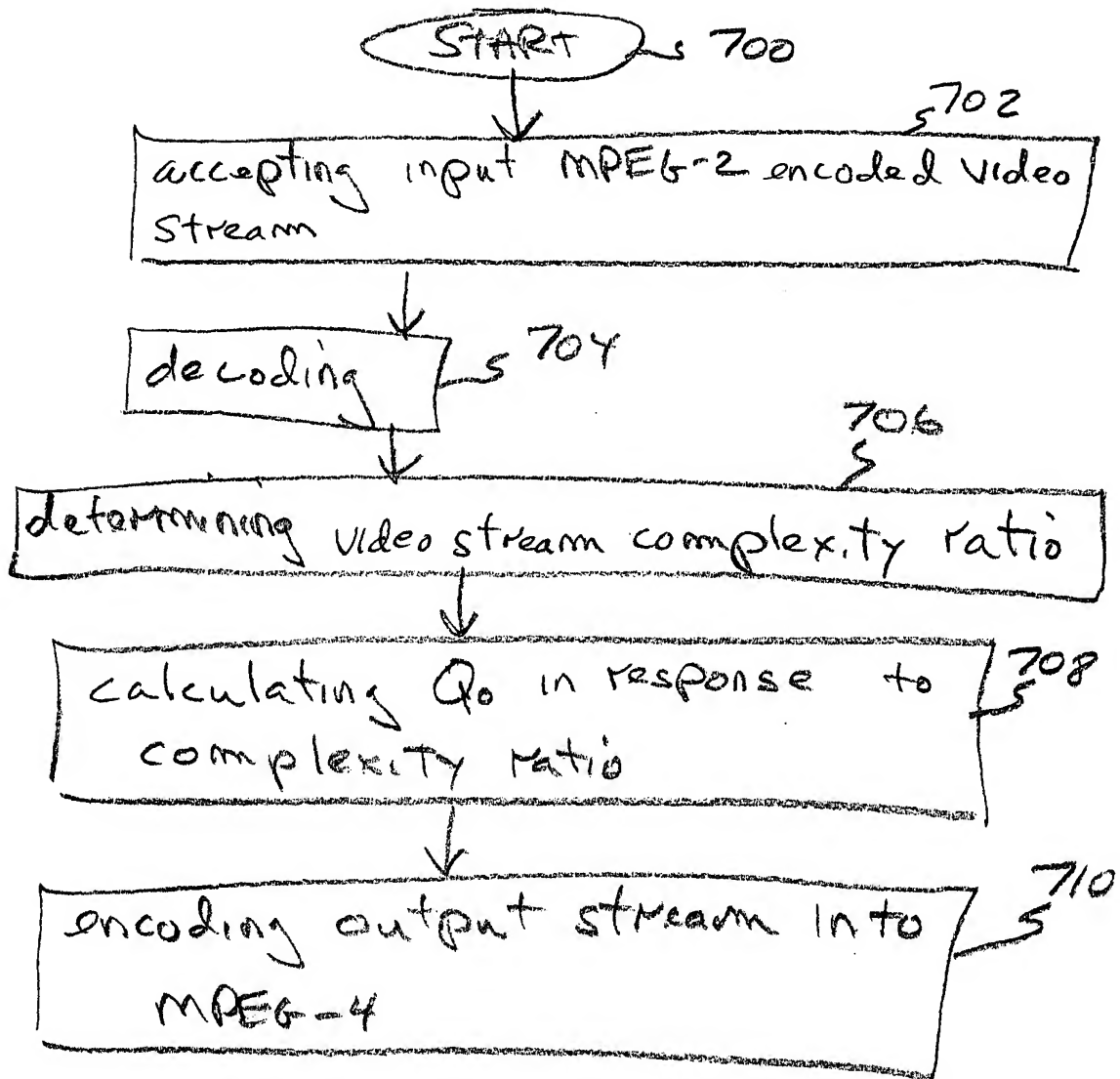


Fig. 7